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ABSTRACT

This study analyzes survey data on 7,200 students from 39 varied elementary, middle, and high schools to examine the hypotheses that (1) satisfaction with school should be most responsive to changes in school practices that affect the social structure, (2) commitment to classwork should relate most to changes in the task structure, and (3) reactions to teachers should be most affected by changes in the authority structure. The data analysis was based on a Quality of School Life scale, which consists of separate subscales for evaluating students' satisfaction with school in general, students' commitment to classwork, and the quality of student-teacher relations. Results of the study show that openness of the instructional program has greater positive impact on students' perceived quality of student-teacher relations than on other dimensions of the quality of school life. Openness of the instructional program appears to involve a basic change of the school authority structure but may not involve as much change in the social task structure. These results are discussed in terms of the potential of subjective indicators for monitoring the progress and effects of educational innovations. (Author/JG)

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Report No. 215

August 1976

CLASSROOM ORGANIZATION AND THE QUALITY OF SCHOOL LIFE

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Introductory Statement

The Center for Social Organization of Schools has two primary objectives: to develop a scientific knowledge of how schools affect their students, and to use this knowledge to develop better school practices and organization.

The Center works through three programs to achieve its objectives. The Schools and Maturity program is studying the effects of school, family, and peer group experiences on the development of attitudes consistent with psychosocial maturity. The objectives are to formulate, assess, and research important educational goals other than traditional academic achievement. The program has developed the Psychosocial Maturity (PSM) Inventory for the assessment of adolescent social, individual, and interpersonal adequacy. The School Organization program is currently concerned with authority-control structures, task structures, reward systems, and peer group processes in schools. It has produced a large-scale study of the effects of open schools, has developed the Teams-Games-Tournament (TGT) instructional process for teaching various subjects in elementary and secondary schools, and has produced a computerized system for school-wide attendance monitoring. The School Process and Career Development program is studying transitions from high school to post secondary institutions and the role of schooling in the development of career plans and the actualization of labor market outcomes.

This report, prepared by the School Organization program, investigates how changes in school organization affect student satisfaction with school, commitment to classwork, and reactions to teachers, as measured by the Quality of School Life scale.

Abstract

The Quality of School Life scale (QSL) is based on three dimensions of a quality of school life concept: The Satisfaction with School subscale is a measure of general well-being in school; The Commitment to Classwork subscale concerns the level of interest in assignments and curricular activities; and the Reactions to Teachers subscale concerns the quality of student-teacher relations. Previous research with the QSL shows the three subscales relate differently to a number of external criteria (Epstein and McPartland, 1976).

This study utilizes survey data from 7200 students in 39 elementary, middle and high schools which differ significantly on a measure of school openness to examine the hypothesis that Satisfaction with School should be most responsive to changes in school practices that affect the social structure, Commitment to Classwork should relate most to changes in the task structure, and Reactions to Teachers should be most affected by changes in the authority structure of schools. This research illustrates how multidimensional subjective educational indicators can provide information on the condition of education and on the nature of structural changes in school organization.

The results show that openness of the instructional program has greater positive impact on students' perceived quality of student-teacher relations than on other dimensions of the quality of school life. Openness of the instructional program appears to involve a basic change of the school authority structure, but may not involve as much change in the social or task structures of schools.

Results are discussed in terms of the potential of subjective indicators for monitoring the progress and effects of educational innovations.

Introduction

Sociologists and educators recently have discussed the potential of subjective education indicators to promote better knowledge of the conditions of education (ASA Social Indicators and Education Section, 1975, Educational Testing Service, 1975). Standard educational indicators collected and reported in the past include finance, population and enrollment characteristics, retention and attainment rates, and standardized achievement scores (Duncan, 1968; Muskin, 1973; National Center for Educational Statistics, 1976; U.S. Department of Commerce, 1973). Conspicuously missing from our current understanding of the conditions of education is information on the quality of school life of students (Gooler, 1975; Sheldon, 1975).

Considerable attention has been given to adult life satisfaction, job satisfaction and commitment (Becker, 1960; Berg, 1971; Bradburn and Caplovitz, 1965; Feldman and Newcomb, 1969; Gurin, 1960; Holland, 1973; Jencks, 1972; Kahn, 1972; Robinson and Shaver, 1973; Trickett and Moos, 1971; Walsh, 1972; Wilson, 1967) and more recently to the quality of life of adults (Campbell, Converse, and Rogers, 1976; Flanagan, 1975; Institute for Social Research, 1975; McFarland, 1975; U.S. Environmental Protection Agency, 1973; Withey, 1975). However, the measurement and meaning of the "quality of life" for youngsters, their general satisfaction, or specific reactions to aspects of schooling has not been given attention.

One reason for this neglect has been the absence of a validated instrument for use across educational levels to measure and compare student reactions to school life in general, to their school work, and to their teachers. Earlier work in this area is limited by measurement instruments that are too long, focus on a single grade or educational

level, or define "satisfaction" as a unidimensional concept. This makes comparative and longitudinal studies and theoretical distinctions difficult or impossible (see for example, Flanders, Morrison and Brode, 1968; Glick, 1970; Meier and McDaniel, 1975; Kohr, 1975; Roshal, Frieze and Wood, 1971; Whitmore, 1974 and test references in Chun, Cobb and French, 1975; Johnson and Bommarito, 1971; Lake, Miles, and Earle, 1973; Robinson and Shaver, 1973). Recently a multidimensional measure -- the Quality of School Life scale (QSL) -- was developed and tested. The scale is a measure with three clearly defined subscales, useful across grade and educational levels for research and evaluation (Epstein and McPartland, 1976).

A second reason that the quality of school life has been ignored as an outcome is the preoccupation of educational research with the measurement of academic achievement. While schools define multiple goals, academic success is the only goal that is regularly measured. This restricted emphasis on achievement has been recently challenged (Hurn, 1976; Jencks, 1972; McPartland and Epstein, 1973; Silberman, 1970).

"Quality of school" had been previously defined as an independent variable or school characteristic in terms of levels of school resources -- e.g. per pupil expenditures, teachers' credentials, library or other school facilities or equipment, (Equality of Educational Opportunity, 1966) -- or even more obliquely in terms of student performance or achievement (Hauser, 1971). Recently more pertinent definitions of school quality have been examined in terms of educational climate (McDill and Rigsby, 1973) or in terms of environmental qualities (McPartland and Epstein, 1973, 1976). In this paper, the quality of school life is a dependent variable -- a measure of students' perceptions which reflect reactions to the quality of school, i.e. the independent variable that deals with the actual experiences characterizing different classroom environments. It may be expected that differences in the quality of

school environments can affect differences in the quality of school life for students much the same way as differences in work environments affect the occupational satisfaction of employees.

The Problem

Three Separate Dimensions of Quality of School Life

Previous research with the Quality of School Life scale established that the three separate dimensions of the concept relate to three different broad dimensions of school organization. This work showed that the Satisfaction (SAT) subscale is most highly associated with the quality of a student's social experiences -- such as a student's social status from nominations by peers and teachers, involvement in extra-curricular activities, open-ended comments on the importance of school as a social (as opposed to an intellectual) environment, recollection of satisfaction with previous schooling and rate of school absenteeism. The Commitment to Classwork (COM) subscale is most clearly related to an individual's belief in the consequences of school work and the character of the work itself, such as the level of the student's future plans for education, the specificity of occupational plans, open-ended comments on the value of schooling for the future, as well as indicators of approaching school work with attention, industry, and outside effort. Scores on the Reactions to Teachers subscale (TCH) relate most to the quality of the classroom environment created or supported by the teacher, e.g. student perceptions of teachers' decision-making style, student experiences with fairness in grades, opportunities for participation and expression in class, as well as measures of students' reputations of getting in trouble with school authorities (Epstein and McPartland, 1976). These associations suggest that each dimension of QSL may be responsive to a general school environment factor, as follows:

Structural Component of Schools		Key Dimension of Quality of School Life
Social	-------->	General well-being, satisfaction
Task	-------->	Commitment to classwork
Authority	-------->	Reactions to teachers

In short, feelings of general well-being may be most strongly influenced by the social aspects of the school, commitment may be most related to the task structure of the school, and reactions to teachers most related to the authority structure of the school. A significant change in schools along one or more of three structural dimensions may affect students' specific reactions to the quality of their school life.

Classroom Organization and the Quality of School Life

Open education, based on specific theoretical principles and assumptions about how children learn (Barth, 1972; Piaget and Inhelder, 1969) is an innovation frequently chosen by school administrators and teachers for the intended purpose to improve the quality of school life. Descriptive accounts of "happier" children in more open schools (Plowden, 1967; Weber, 1971) make clear the need for comprehensive, empirical studies of the quality of school life in open and traditional school programs.

Recent studies have indicated that typical "open" instructional programs differ from the more "traditional" approaches in the way teachers organize the learning environment (Musella in Traub, Weiss, Fisher, and Musella, 1973; Walberg & Thomas, 1969). Compared to the more traditional instructional approaches, open education places fewer restrictions on student movement and interaction with other students, provides more alternative activities to meet student interests or needs, and gives students greater responsibility for selecting assignments and supervising progress (Epstein and McPartland, 1975; McPartland and Epstein, 1973, 1976). One could predict that a representative cross-section of students

attending schools which differ significantly in openness of the instructional program would show measurable differences in their scores on each of the three dimensions of the Quality of School Life Scale -- on general satisfaction, on commitment to classwork, as well as on positive reactions to teachers.

Students' general satisfaction and well-being in school may be enhanced in part by the increased variety of activities and contacts with peers and teachers in open-environment schools. Teachers in open schools tend to minimize the stylized behavior expected of students -- such as being silent and remaining seated for extended periods, ignoring other students' work and activities, waiting for infrequent turns to participate in lessons, and following rigid time limits. The students' social community -- the nature and extent of social contacts during classtime -- is determined by constraints such as those enumerated. Students should find life in open-environment schools to be more like life outside of school, reducing the sharp points of comparison between school and non-school which may cause some students in traditional classrooms to be resentful and discontented.

Students' commitment to classwork may be strengthened by increased individualization of tasks in open-environment schools. In schools where all students work on the same lesson at the same time, some are being asked to do work that is too easy while others cannot meet the demands of the lesson. Some are being asked to work on projects either peripherally of interest or totally uninteresting to them. Both groups may withdraw, watch the clock, daydream about things they would rather be doing, or find something else to do which disrupts the lesson and distracts the teacher and other students. In open-environment schools, more frequent use of individualization and more participation by students in

the selection of topics and projects means that the academic demands should be more personally appropriate for each student. If students are working on assignments designed to challenge them at their own level, especially assignments they have selected on their own, it is more likely that they will be personally involved in and rewarded for their work.

Students' reaction to their teachers may be more positive due to the change and exchange of roles by teachers and students in open-environment schools. The teacher becomes less the gate keeper, time keeper, traffic cop and judge. By relinquishing some control to the students (and some to the physical environment itself), the teacher assumes less than total control over equipment, materials, pacing, directions, design of assignments, and evaluation. When students make important decisions about their work and their actions, the teacher is no longer viewed as the only source of school demands. The decision-making process in open schools should cause more frequent individual contacts between students and their teachers. When students take an active role in learning, they can develop a working relationship with their teachers. In contrast to some schools where contacts with teachers tend to occur when a student is in trouble, contacts with teachers in open schools occur frequently for positive, decision-making purposes. This kind of interaction should promote more positive student reactions toward teachers.

If open schools successfully alter the social, task, and/or authority structure typically found in more traditional schools, then there should be measurable differences in the satisfaction, commitment and reactions to teachers of students in open and traditional schools. This paper presents research that evaluates the effects of open education on students, and also illustrates the potential of subjective educational measures for

assessing school effectiveness. The next section provides information on the sample of students and measures used in the study.

The Sample and Measures

The sample. A county school system in Maryland with traditional and open instructional programs in 23 elementary, 10 middle, and 6 high schools was chosen for this study. This paper utilizes data from a sample survey of 7200 students in grades 5, 6, 7, 9, and 12. The questionnaires were administered by a trained research staff with teachers absent from the rooms.

The dependent variables.

There are two parallel measures of students' subjective evaluations of their school experiences. One measure has the entire school experience as the referrant; while the second focuses on specific classroom situations.

(1) The Quality of School Life Scale (QSL) is a multidimensional instrument that has been used with elementary, middle, and high school students. Three subscales form the 27-item QSL: The Satisfaction (SAT) subscale measures general well-being in school; Commitment to Classwork (COM) deals with the level of student interest in their assignments and curricular activities; and Reactions to Teachers (TCH) concerns student-teacher relations. Positive reactions to these three measures suggest a high quality of school experiences. The psychometric properties of QSL have been fully reported (Epstein and McPartland, 1976). Table 1 lists a sample of QSL items.

(2) Quality of academic subjects. In this paper an additional set of items on the quality of experiences in academic subject classrooms (English and math) is used to support the basic analyses. The single

TABLE 1

Representative Items from the
Quality of School Life Scale

Item	Scoring[a] 1/0
A. Satisfaction with School (SAT), 5 items including:	
The school and I are like: Good Friends; Friends;/ Distant Relatives; Strangers; Enemies.	MC
I like school very much.	T/F
Most of the time I do not want to go to school.	F/T
B. Commitment to Classwork (COM), 11 items including:	
Work in class is just busy work and a waste of time.	SN/AOS
In class, I often count the minutes till it ends.	T/F
In my classes I get so interested in an assignment or project that I don't want to stop work. Everyday; quite often; / hardly ever; never.	MC
The things I get to work on in most of my classes are: Great stuff--really interesting to me; Good stuff--pretty interesting to me; / OK--school work is school work; Dull stuff--not very interesting to me; Trash--a total loss for me.	MC
C. Reactions to Teachers (TCH), 11 items including:	
I wish I could have the same teachers next year.	T/F
Thinking of my teachers this term, I really like: All of them; Most...;/ Half...; One or two...; None...	MC
Teachers here have a way with students that makes us like them.	T/F
D. Quality of School Life (QSL)	
The total scale is comprised of the 27 items from the three scales listed above.	

[a] Item response formats include T/F = true/false; MC = multiple choice; and AO/SSN = always, often,/sometimes, seldom, never.
Each item is scored 1 or 0 as indicated by the slash (/) shown in the scoring column or in the multiple choice item responses.
Response categories preceding the slash = 1; categories following the slash = 0. Item scores are then summed for subscale and scale totals.

item indexes of satisfaction, commitment and reactions to teachers of English and math parallel the content of the QSL scale but appeared separately from the QSL items in the survey questionnaire.[1/] These subject specific reactions are used in analyses along with a measure of subject-specific openness of teachers' classrooms, described in (4) below.

The independent variables.

There are four measures of the degree of "openness" of a student's schooling. One measure is based on school averages of student responses to 28 items which combine several school subjects. A second measure is based on school averages of student responses to 23 general items about school which have no subject identification. A third measure focuses on experiences over a number of years. A fourth measure is based on classroom averages for students having the same teacher for the same subject.

(1) The Open School Scale is a measure based on the average of student response to a 28-item index. Each of seven questions in the student questionnaire was repeated four times to refer separately to each of four academic subjects. The first of the seven questions appeared in the following form:

> Read each sentence below. Then, for each of the subjects, check the line that tells how often the statement is true for you in each subject.
>
> 1. In class, I can talk to other students while I work

[2/]	Always	Often	Sometimes	Seldom	Never
English	_____	_____	_____	_____	_____
Math	_____	_____	_____	_____	_____
Social Studies	_____	_____	_____	_____	_____
Science	_____	_____	_____	_____	_____

The remaining six questions, which also followed the same subject-specific format, were:

2. In class I must sit next to the same students.
3. In class, I can move about the room without asking the teacher.

4. In class, the teacher stands in front of the room and works with the class as a whole.
5. When I am working on a lesson, the other students in my class are working on the same lesson.
6. Most days there are several assignments the teacher tells me I could select, and I choose the one I want to work on.
7. I could fall behind in my work without the teacher finding out about it for a couple of weeks or more.

For each of the 28 items (7 questions X 4 subjects) the percent of students who saw the program as "open"[3/] was calculated in each grade in each school. The measure of "school openness" is the average percent across the 28 items and is assigned according to the school and grade in which each individual student is enrolled. For example, a score of 25.0 for a particular school and grade means that on the average item 25 percent of the students report that their classes are usually "open" in mode of operation. Theoretically, the score on this index could range from 0 to 100 percent. The actual range of scores for this sample on the School Openness measure is 11.5 to 39.7 in grade 5, 10.2 to 35.3 in grade 6, 14.4 to 37.3 in grade 7, 16.5 to 53.1 in grade 9, and 17.4 to 58.1 in grade 12.

A principle component factor analysis was conducted to examine the structure which underlies the several questions used in the openness index (McPartland and Epstein, 1973). A useful structure of four factors emerged:

(1) variety of activities permitted
(2) degree of individualization of tasks
(3) student share of responsibility for assignment selection
(4) student share of responsibility for monitoring progress [4/]

In the results reported here, the overall index of openness of school programs and the separate factors of that index are used in the study of the relationship of openness with the Quality of School Life.

(2) Alternate measure of openness of the school program.

An alternate measure of openness comprised of 23 items on the nature

of school experiences[5] was constructed in the same way we described for the basic Open School Scale. The alternate measure is used to confirm the basic findings and is especially useful in evaluating the elementary school level results where there may be less emphasis on academic subject distinctions.

(3) Duration of attendance in open schools.

A third measure of openness was used to check the relationships reported in this paper. An index of the length of exposure to school openness was calculated for each student. This index is based on information on the Open School Scale from students and teachers on 2 surveys (1973 and 1974) and retrospective evaluations from teachers on the openness of school programs for four previous years. It is assumed that the longer a student experiences open education, the more the student will be influenced or affected by the nature of that environment. Students were assigned a duration score, ranging from zero to six years, based on the number of consecutive years they attended schools with highly open programs.

(4) Subject-specific openness scores.

For a final test, separate measures of openness were constructed for specific academic subjects. Indexes of English Openness and Math Openness use the same 7 items as the Open School Scale. Scores were derived for specific teachers' classrooms and assigned to students identified by the students surveyed according to school, grade, and teachers' classroom for English and math which they attended.

Control variables: Student Background and Family Characteristics

There are eight variables used to measure differences in student inputs to the schools. These variables include parents' education, material possessions in the home, family size, family decision-making style, rules for children in the home, success in school, sex and race.[6] The first three

are indicators of socioeconomic status, and the next two are measures of the authority structure in the home.

The following section presents results of analyses of the relationships between openness of the instructional program and students' evaluations of the quality of school life.

Results

Multiple regression analyses were conducted to examine the relationship between openness of the school program and the quality of school life. Table 2 shows that across a number of tests using the multiple measures described above, with student background and family characteristics controlled, school openness is most strongly associated with the Reactions to Teachers subscale at both the elementary and secondary levels.

Table 2 presents the standardized regression coefficients showing the relationship between the three QSL subscales and three measures of openness. At the secondary level, the patterns are most consistent. Openness is most strongly associated with Reactions to Teachers, then to Satisfaction, and is least related to Commitment to Classwork. The relationship between openness and reactions to teachers is always about twice as big as the relationship between openness and general satisfaction. The relationship of openness with commitment to classwork never reaches a standard level of significance.

At the elementary level the direction and significance of the relationships are more equivocal depending on the measures used, but, as at the secondary level, openness is most positively related to reactions to teachers. This relationship approaches the .10 level of significance in the analyses using the alternate measure of openness (a more general measure than the subject-related open school scales), and is clearly significant

Table 2

Relationship of 3 Measures of Openness of School Program with QSL Subscales, Given 8 Controls, by Educational Level.

b = standardized regression coefficients; t = associated test statistic

	Measure of Openness					
	Open School Scale		Alternate Measure of Openness		Duration	
Quality of School Life Subscale	b	(t)	b	(t)	b	(t)
Secondary school sample						
Satisfaction with school	.039	(2.13)	.052	(2.85)	.041	(2.37)
Commitment to classwork	.016	(0.89)	.025	(1.44)	.023	(1.35)
Reactions to teachers	.086	(4.67)	.103	(5.65)	.080	(4.66)
(N=3206)						
Elementary school sample						
Satisfaction with school	-.042	(-1.40)	-.001	(-0.18)	.068	(2.24)
Commitment to classwork	-.058	(-1.93)	-.003	(-0.10)	.037	(1.24)
Reactions to teachers	-.025	(-0.82)	.049	(1.62)	.097	(3.21)
(N=1060)						

a/ Controls include grade level, sex, race, parents' education, items in the home, family size, rules in the home, and success in school.

when duration of years attending open elementary schools is taken into account.

Because this study involves variables defined at both individual and school level, a final check was made using a statistical model for hierarchial data (Wiley, 1975, equation 3).[7/] This analysis, conducted for the secondary school sample, shows results of the relationship between openness and quality of school life at the school level, after an adjustment is made for the effect of individual background characteristics at the individual level, and after a second adjustment for background characteristics (aggregated by school and grade) at the school level. Table 3 shows that the substantive results remain as stated: Openness of the school program relates most positively and significantly to reactions to teachers in schools.

Tables 2 and 3 provide a broad analysis of the relationships under study, but we need to examine more carefully the specific influence of aspects of openness on the quality of school life. Table 4 shows the relationship of the four separate factors of the open school scale with the three dimensions of the Quality of School Life Scale. The table presents standardized regression coefficients, indicating the relationship of satisfaction, commitment, and reactions to teachers with each aspect of openness, after controlling on student background and family characteristics. These results confirm and extend the results in Table 2. All aspects of openness relate most highly to the quality of teacher-student relations. Individualization of tasks and selection of assignments by students, in that order, are most positively associated with all three dimensions of the quality of school life for students.

Table 3

Summary of Hierarchical Analysis Showing Relationship Between School Openness and Quality of School Life, Secondary Level, N = 31 Schools.[a/]

b = standardized regression coefficient; t = associated test statistic

School Level Quality of School Life:	Relationship with School Level Openness	
	b	(t)
Satisfaction with School	.289	(1.13)
Commitment to Classwork	-.151	(-0.51)
Reactions to Teachers	.407	(2.04)

[a/] Controls at the individual level and aggregated for school by grade level include sex, race, parents' education, items in the home, family style, rules in the home, and report card grades.

TABLE 4

Summary of regressions of Quality of School Life subscales on four factors of openness of school program and background controls [a/] for secondary students, N = 3206.

Factor of Openness of School Program	Quality of School Life Subscale: Satisfaction with School	Commitment to Classwork	Reactions to Teachers
Variety of behaviors permitted	.019 (1.04)	-.001 (-0.04)	.054 (2.91)
Individualization	.061 (3.46)	.030 (1.78)	.099 (5.62)
Shared Responsibility for Selecting Assignments	.041 (2.23)	.025 (1.43)	.095 (5.18)
Shared Responsibility for Monitoring Progress	.029 (1.05)	.010 (0.37)	.124 (4.45)

a/ Controls include grade level, sex, race, parents' education, items in the home, family size, family style, rules in the home, and success in school.

Table 5 reports the relationships of aspects of openness of specific teachers' classrooms in English and math and students' reactions to the quality of their experiences in these subjects. These are more proximate measures of openness and focus on their relationships with the matching evaluation of the quality of experiences. However, these are probably less reliable indicators of "true" relationships, due to the nature of the dependent measure (i.e. single item indicators). Nevertheless, the correlations presented on Table 5, corrected for attenuation, substantiate the basic conclusion of the earlier tables -- openness is most positively associated with the quality of student-teacher relations. This table suggests a stronger positive association between openness and student satisfaction than is suggested on earlier tables, and suggests a negative association between one aspect of openness -- student monitoring responsibility -- and commitment to classwork.

TABLE 5

Partial correlations[a/], of subject teachers' classroom openness with items measuring students' reactions to academic subjects. Secondary sample, N = 3825.

	Reactions to English [b/]		
English Openness:	SAT	COM	TCH
Variety of behaviors	.321	.052	.344
Individualization	.111	.031	.147
Student Assignment Selection	.347	.078	.436
Student Monitoring Responsibility	.111	-.182	.138

	Reactions to Math [b/]		
Math Openness:	SAT	COM	TCH
Variety of behaviors	.453	.167	.444
Individualization	.155	.015	.182
Student Assignment Selection	.510	.057	.527
Student Monitoring Responsibility	.022	-.076	-.022

a/ Grade level of respondents is controlled.

b/ These are single item measures and results presented here are not directly comparable with results of analyses using the full Quality of School Life scales reported in earlier tables.

Other Findings Regarding Openness and Authority Systems

The foregoing analyses using the Quality of School Life subscales indicate that the most salient changes due to openness are concerned with schools' authority system, rather than the social or task structures. Other analyses with these data serve to corroborate that school openness includes important differences in teacher-student relations, although these findings do not address the relative association of openness with the authority structure in comparison to social or task changes.

The teachers themselves in open schools report a different attitude about the appropriateness and benefits of student sharing of authority. A sample of 162 teachers from the secondary schools responded to a question concerning the per cent of students who would be expected to progress best academically in each of five categories of teacher-student authority relations ranging from total teacher control of planning, selecting, monitoring and evaluating students' academic programs, through different degrees of teacher-student sharing, to total student control of the academic program. Table 6 shows that teachers in more open schools tend to believe that total teacher control is not best for students' progress.[8/] Instead they tend to believe that students should share control, especially if the level of shared responsibility was in some middle range.

From other questions asked of teachers, we find that teachers in more traditional schools more often agree that children (a) "are being given too much freedom nowadays," (b) "have lost the curiosity they had had when they first started school," and that (c) "obedience and respect for authority are the most important things children should learn." Controlling on grade level and average social class level of students taught, the partial correlations of openness of the school program at the secondary

TABLE 6

Teachers' Opinion of Percent of Students Who Would Make Optimum Progress in School Under Different Student-Teacher Role Categories

secondary school teachers, N = 162.

b = standardized beta coefficient; t = associated test statistic

Student-Teacher Role Category[a]	Relationship with Openness of School Program [b]	
	b	(t)
1. Total teacher control	-.333	(-4.65) p < .001
2. High teacher control, some student choice	.184	(2.48) p < .02
3. Equal student and teacher control	.328	(4.55) p < .001
4. High student control, some teacher direction and evaluation	.134	(1.77) p < .10
5. Total student control	.043	(0.56) NS

[a] Refers to degree of teacher and student-control on planning, selecting, monitoring and evaluating students' school work.

[b] Partial correlation with control on teacher's grade level and average social class level of students taught. The Teachers Openness scale consists of the same 7 items as the students' Open School Scale. Teachers responded for the grade level and subject they most often teach. Scores were aggregated by school and assigned to each teacher.

level with teachers' opinions on these beliefs are -.132, -.126, -.118 respectively and are significant at or approaching the .10 level. Put another way, while the data are limited, the relationships suggest that teachers from open schools are more likely to operate on assumptions about students and student behavior that enable them to offer students opportunities for greater responsibilities in class. In effect, this would permit a redefinition by teachers in open schools of both teacher and student roles.

Not only do teachers in open schools view authority relations differently from traditional school staff, but students in open school report different teacher-student relations. Other analyses were conducted on two scales based on student responses (McPartland and Epstein, 1976). One scale involves students' perceptions of the kinds of behaviors their teachers expect and reward. Students were asked how much teachers emphasize and reward conformity and unquestioned deference to teachers rather than creativity and expression of opinions. Table 7 shows that students in open schools report that their teachers expect or reward them for "speaking out with opinions" and "having unusual ideas" while students in traditional schools report their teachers expect or reward them for "carefully following directions" and "being neat and clean." (The latter behaviors were highly valued in all schools, but somewhat less so in open schools). A second scale from student reports concerns the teacher-student decision-making process, i.e. whether students participate in classroom decisions. The third entry on Table 7 shows that students in open schools report significantly higher involvement in the classroom decision-making process, i.e. whether students participate in classroom decisions. The third entry on Table 7 shows students

TABLE 7

Relationship Between Openness of the Instructional Program and Students' Reports of Behaviors Rewarded by Teachers and Teacher-Student Decision-making Style, Secondary Sample. a/

(b = standardized regression coefficient; t = associated test statistic)

Students' reports of:	Relationships with openness	
	b b/	(t)
Teacher rewards for Conformity and Deference	-.08	(-5.1)
Teacher rewards for Creativity and Self-Expression	.06	(3.8)
Teacher-student decision-making style	.18	(13.6)

a/ More detailed analyses of these relationships are reported in McPartland and Epstein, 1976.

b/ The coefficients shown are partial standardized betas from equations that controlled for grade level.

in open schools report significantly higher involvement in classroom decision-making authority.

Tables 6 and 7 support the basic analyses based on the Quality of School Life subscale in Tables 2-5 which suggest that a primary consequence of open instructional programs is improved student-authority relations.

Discussion and Summary

Primarily, open schooling can be viewed as a change in authority structure more than a change in the social aspects of the environment or task structure. Although there are reasons to predict that openness can alter all three aspects of school structure (authority, social and task), the analyses conducted for this study indicate that in spite of inter-correlations among the aspects of openness, and among the dimensions of the quality of school life, it is possible to document the relative strength of relationships among these variables. The most salient change for students is in the quality of relationships with authority figures. The second most likely change for students is in their general satisfaction. Unaffected by openness is student commitment to their classwork. This conclusion is based on the following results:

1. Openness is most positively associated with the Reaction to Teachers (TCH) subscale of QSL. The relationship between openness and satisfaction (SAT) is much smaller and appears limited to secondary students. There is no consistently significant, positive association with Commitment to Classwork (COM). This relative pattern exists when the school level, and when the subject-specific teachers' classrooms level measures of openness are utilized as environmental conditions.

2. When four factors of school "openness" are related to the three dimensions of the Quality of School Life scale, the same relative associa-

tions with openness are confirmed. Students' Reactions to Teachers relate most positively with openness for each aspect of openness. That is, school openness in terms of either variety of activities, individualization, or students' share of responsibility has its greatest impact on Reactions to Teachers, rather than general Satisfaction or Commitment to Classwork.

3. Other results corroborate the conclusion that teacher-student relationships are influenced in several important ways in open schools. Specifically, teachers in open schools have themselves different values regarding the priority of teacher control as an overriding goal, and tend to have different attitudes and beliefs about child development. In more open schools, teachers are seen by students to place less emphasis on student conformity relative to student creativity and are more likely to establish a partnership with students for classroom decision-making.

Finding that open schools revise teacher and student roles and improve student-teacher relations is clearly in accord with definitions of open education and descriptions of teacher behavior in open classrooms (Barth, 1972; Bussis, Chittenden, and Anarel, 1976; Plowden, 1967; Walberg and Thomas, 1972; and Weber, 1971). In more open instructional programs, students assume new responsibilities in monitoring their classroom behavior and academic progress, and in selecting their assignments. Teachers, too, change their traditional role as master/lecturer as they individualize lessons, work with small groups, extend student space beyond the desk of the student, permit students to choose assignments and to complete them in flexible time periods. In other words, rules and expectations for student and teacher behaviors are changed.

After we acknowledge the basic conclusion that openness is primarily a revision of the authority structure, we must turn some attention to the relationship of openness with the other two structural components of

schools -- the social and task structures. It is quite possible that along with revised student and teacher behaviors, changes occur in the nature of social exchange among students in more open schools. Tables 2, 4 and 5 provide some evidence that, especially for secondary students, openness of the instructional program is associated with greater general satisfaction with school and specific subject classes. Based on previous links between the SAT subscale and external criteria such as patterns of peer interaction and peer prestige and participation in social, non-academic activities in schools, it appears that openness may alter to some degree the social experiences of students, though less consistently and less dramatically than it alters the roles of students and teachers in planning, selecting and evaluating academic activities. Other evidence is available that suggests the social structure is altered by open educational practices. Hallinan (1975) and Epstein and McPartland (in process) report interesting, though inconclusive evidence of differences in patterns of association among peers in open and traditional classrooms.

There is no significant and consistent evidence of an interpretable association between Commitment to Classwork and openness of the school program. In other words, these analyses show students in open and traditional school about equally committed or uncommitted to school. Based on previously hypothesized links between commitment and the task structure of schools, one would conclude that openness, as measured here, has not altered the design of academic tasks dramatically enough to change students' commitment to their classwork. Thus, while open school practices clearly revise responsibilities of students and teachers, and, to a lesser extent, suggest a change in the nature of social exchange among students, these practices show no evidence of change in the structure or content of

students' curricula to produce differences in the attraction, meaning or importance of classwork to students as measured by the commitment (COM) subscale. In addition, open schools may not greatly change the formal reward consequences of performance on classwork. The probabilities of receiving high grades on tests or report cards may be equally discouraging for below average students in both open and traditional classrooms. Improved participation, choice and individualization may not prove sufficient reforms in open classrooms for developing greater student commitment to school work, unless also the criteria and procedures for evaluation of task performance allow many more students to receive recognition and rewards.

Besides reporting the substantive findings of the relationships between school openness and student reactions, this paper demonstrates how subjective educational indicators can help to specify the nature of particular school structure variations. The paper proceeded with the following approach: (1) Previous work has shown the Quality of School Life to be made up of three components; (2) Previous work has shown that each component of QSL is clearly related to a different type of school structural dimension; (3) With this knowledge, the component subscales of QSL can be used to help identify the most salient aspects of specific school innovations. Using QSL in this way, we can help determine whether and how a specific school innovation is "taking" from the point of view of students experiencing the new program.

One might predict that the school openness would equally change the social, task and authority systems of a school or classroom. However, results of this research suggest that, from the perspective of student experiences,

open education represents most clearly a revision of the authority relations in the school, with less change to the social aspects or task components of school operations.

The Quality of School Life scale (or other multidimensional measures like it) can provide useful feedback to researchers, teachers and administrators about how students react to changes made in instructional programs. Educators and researchers must ask, "Does what we do in school make a difference to the students?" Measures like the QSL, using student perceptions of their own experiences, help to investigate the changes that particular innovations make in the structure of schooling.

While sociology has recognized the importance of monitoring students' progress in education to study how levels of school attainment may affect the quality of adult life, it has not given systematic attention to the quality of educational environments which may be an important influence on the amount of schooling students attain. One could imagine that October and May indicators of students' perceived quality of school life may be as important for a school and the people in it, as economic indicators are for providing important, immediate clues to economists. The use of subjective educational indicators can tell us what is happening to students exposed to changing conditions of education.

Footnotes

1/ The subject-specific items used in this paper appeared in the following form:

How often is each sentence TRUE for you in each subject you take in school?

1. I am very happy when I'm in school.....

	Always	Often	Sometimes	Seldom	Never
...in English	_____	_____	_____	_____	_____
...in Math	_____	_____	_____	_____	_____

The remaining questions followed the same format:

2. Work in class is just busy work and a waste of time....
3. I feel I can go to my teacher with the things that are on my mind.....

2/ In the elementary grades, "Language Arts" replaced English as one of the subjects.

3/ This is the percent who checked "Always" or "Often" to the positive questions, or the percent who checked "Seldom" or "Never" to the negative questions. Questions 2, 3, 6 and 7 are scored in the positive direction, and 1, 4 and 5 are scored negatively.

4/ Questions 1 and 2 load primarily on the first factor; 4 and 5 on the second; 3 and 6 on the third; and 7 on the fourth factor. The KR 20 reliability coefficient for the scale is .77.

5/ Sample items from the alternate measure of openness include:

In my classes I usually may ask other students to help me with my work.
I must stay in my seat most of the time while other students are working.
In my classes we have many things I can touch, examine, and experiment with every day.
If I finish a lesson before others are done, I can start a new lesson without waiting for the others.
In most of my classes the teachers tell me what I must work on. I have no choice.
Almost every day I get some of my work marked or checked.

Response patterns for the 23 items are true/false and multiple choice.

6/ (a) Sex is scored Male = 1, Female = 0.
(b) Race is scored White = 1, Black = 0.
(c) Parents' education is the sum of the score on two student questionnaire items: "How far in school did your father go?" and "How far in school did your mother go?"
The scoring used for the responses to each of these questions is:
Did not go to high school = 8
Some high school, but did not graduate = 10
Graduated from high school = 12
Technical or business school after high school = 13
Some college, but less than 4 years = 14
Graduated from a 4 year college = 16
Attended graduate or professional school after college = 18
This scoring represents the number of years of school completed for each category.

(d) Material possessions in the home is the number of items checked by students from a check-list of 23 possibilities.
The check-list included the following: telephone, two telephones, vacuum cleaner, stereo hi-fi record player, air conditioner, electric dishwasher, your own family washing machine, your own family clothes dryer, dictionary, encyclopedia, daily newspaper, three or more magazine subscriptions, black and white TV, color TV, car, second car, two bathrooms, tape recorder, home movie projector, home slide projector, typewriter, piano, skis or golf clubs.
The reliability coefficient (KR-20) for this scale equals .79.

(e) Family size is measured by one student questionnaire item: "How many brothers and sisters do you have?"

(f) Family decision-making style is a scale composed of the sum of scores from twelve items on the student questionnaire.
The twelve items and their scoring are:

My parents are:
0 = very strict
0 = strict
0 = a little strict
1 = not at all strict

T = 0, F = 1 My parents want me to follow their directions even if I disagree with their reasons.
T = 0, F = 1 My parents often worry that I am up to something they won't like.
T = 0, F = 1 I do not have to ask my parents for permission to do most things.
T = 0, F = 1 My parents trust me to do what they expect without checking up on me.
T = 0, F = 1 My parents do not like me to disagree with them if their friends are around.
T = 0, F = 1 I often do not know why I am supposed to do what my parents tell me to do.
T = 0, F = 1 I often count on my parents to solve many of my problems for me.
T = 0, F = 1 I have a lot of loud arguments with my parents about their rules and decisions for me.

(f) Continued

T = 0, F = 1 My parents treat me more like a little kid than like an adult.

How are most decisions about you usually made in your family?
0 = My parents tell me just what to do.
0 = My parents ask me how I feel and then they decide.
1 = My parents tell me how they feel and then I decide.
1 = My parents let me decide.
How much do you take part in making family decisions about yourself?
1 = Very much
1 = Much
0 = Some
0 = Very little
0 = None at all

The reliability coefficient (KR-20) for this scale equals .71.

(g) Rules for children in the home is the number of behaviors from a check-list of 14 possibilities for which a student indicates on the questionnaire that his parents have definite rules. The check-list includes:

time to be in at night on weekends
time to be in on school nights
time spent watching TV
time spent on homework
against going around with certain boys
against going around with certain girls
eating dinner with the family
use of telephone
clothes you may wear
how you wear your hair
going to church or temple
doing the dishes
doing other jobs around the house
coming straight home from school

The reliability coefficient (KR-20) for this scale equals .75.

(h) Report card grades in math or English as recorded by the student on the questionnaire were coded A = 5, B = 4, C = 3, D = 2, and E = 1 for each subject and summed. This measure of school success is included as a background measure to control for differences in the distribution of high and low report card grades between schools that may influence how students perceive the quality of their school experiences.

7/ The authors gratefully acknowledge Denise C. Daiger for conducting the hierarchical analyses and providing other technical assistance in preparation of this report.

8/ The item to which teachers responded is:

An important question is the number of students who will progress best under different school organizations. In this school, for the grade level you indicated above, what percentage of students do you think would progress best under each of the following. Write a percentage on each line; the sum should equal 100%.

a. The teacher plans and presents the instructional program to the class or to designated groups within the class, and evaluates each student's work. _____%

b. The teacher prepares a variety of alternative activities from which the student chooses what to work on; the teacher evaluates student work. _____%

c. Part of the time a student chooses among teacher-defined and evaluated activities; up to half the time a student is free to pursue his own interests. _____%

d. The student proposes his own goals and program of activities; the teacher is available for consultation, and monitors and evaluates student performance. _____%

e. The student defines his goals and program of activities and evaluates his own performance; the teacher is available as an experienced resource person. _____%

TOTAL 100 %

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